

REMARKS

Upon entry of this amendment, claims 1-12, 14-16, 20 and 21 remain pending. Claim 1 is the only independent claim. Reconsideration and reexamination are respectfully requested in view of the amendments and comments presented herein.

I. The Office Action

Claims 1-3, 5, 8, 14 and 17-19 were rejected under 35 U.S.C. §102(e) as being anticipated by Licht (U.S. Pub. No. 2003/0050093).

Claims 4, 6-7, 13 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Defosse (U.S. Pub. No. 2003/0003865).

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of "Flexible Electronic Systems."

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of "Flexible Electronic Systems," and further in view of Mancini (U.S. 6,583,982).

Claims 11-12 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Canada (U.S. 6,301,514).

Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Jollota (U.S. 7,076,274) and further in view of Canada.

Claims 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Keyes (U.S. Pub. No. 2003/0171827).

II. Rejection of Claims 1-3, 5, 8, 14 and 17-19 Under 35 U.S.C. §102(e)

Claims 1-3, 5, 8, 14 and 17-19 stand rejected under 35 U.S.C. §102(e) as being anticipated by Licht. It is respectfully requested that this rejection be withdrawn, as the cited reference fails to disclose each and every element of the subject matter defined by amended claim 1 and its dependent claims.

The claimed subject matter relates to a wireless *backplane extender* for a distributed modular input/output system in an industrial automation control system. With reference to the example of FIG. 5 of the present application, the i/o modules 120a, 120b of a master input/output portion and a primary wireless device 170m are

connected by a master backplane 118A to each other and also to a network adapter 112 (the network adapter 112 is connected to an industrial controller IC by a network 16). The i/o modules 120c,120d,120e of a servant input/output portion and a secondary wireless device 170s are connected to each other by a servant backplane 118B. The master backplane 118A and servant backplane 118B are physically disconnected and spaced-apart but are operably connected by a primary wireless link 118w.

In contrast, Licht relates to a wireless communication interface for an industrial controller. The wireless module is mounted *within the industrial controller*, and Licht employs RFID chipsets to communicate with other equipment. For example, in Fig. 2, Licht shows that the wireless interface **15** is mounted within the housing **2** of the controller for wireless communication between the controller and a remote device.

As such, Licht does not relate to a distributed modular i/o system of the type defined in amended claim and shown, e.g., in FIG. 5 of the present application.

Amended claim 1 recites:

- the primary wireless device of the master input/output portion is connected physically and electrically to a first group of one or more i/o modules by a master backplane, and
- the secondary wireless device of the servant input/output portion is connected physically and electrically to a second group of one or more i/o modules by a servant backplane,
- the servant input/output portion is physically separate and spaced from the master input/output portion, i.e., the master backplane and servant backplane are physically separate and spaced-apart.

Licht does not disclose or suggest this claimed aspect of the present development. The wireless RFID module of Licht is located within the housing of the controller. Licht does not disclose or fairly suggest physically separate master and servant groups of input/output modules that communicate with each other via wireless backplane link. Instead, Licht uses RFID to communicate with various groups of

modules directly from the controller. Thus, Licht fails to disclose or suggest these and other features explicitly defined in amended claim 1.

In view of the foregoing amendments and remarks, it is respectfully submitted that Licht fails to disclose or suggest each and every element of the claimed subject matter. Accordingly, it is respectfully submitted that this rejection has been overcome.

III. Rejection of Claims 4, 6-7, 13 and 15 Under 35 U.S.C. §103(a)

Claims 4, 6-7, 13 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Defosse. Claims 4, 6-7, 13 and 15 depend from amended independent claim 1 and are respectfully submitted to be allowable with amended claim 1. It is respectfully submitted that Defosse cannot overcome the noted deficiencies of Licht with respect to independent claim 1, and the applicants respectfully request that this rejection be withdrawn.

IV. Rejection of Claims 9 and 10 Under 35 U.S.C. §103(a)

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of the Examiner's Official Notice supported by "Flexible Electronic Systems." The applicants respectfully traverse this rejection and the Examiner's taking of Official Notice.

Claim 9 relates to a specific arrangement in which the claimed distributed i/o system includes:

- the master input/output portion; and,
- a plurality of different servant input/output portions, wherein at least some of the different servant input/output portions are located in different physical environments including at least two of IP-20, IP-65, IP-67 type environments.

The existence of the IP-20, IP-65, IP-67 physical environments such as a cabinet enclosure (IP-20), machine mounted (IP-65), or harsh environment (IP-67) are generally known, *but the specific arrangement of wired and wireless devices as set forth in dependent claims 9 and 10 is not disclosed or suggested in Licht, Flexible Electronic Systems, or any other cited document of record, and the limitations of claims 9 and 10*

are not facts that can properly be the subject of Official Notice. With respect to the Examiner's use of Official Notice, it is respectfully submitted that the specific systems of claims 9 and 10 are not facts capable of instant and unquestionable demonstration as being well-known, which is the standard required by the MPEP for taking Official Notice (MPEP2144.03). As such, the Examiner's taking of Official Notice of the limitations of claim 9 and/or claim 10 is respectfully submitted to be improper and is respectfully traversed.

As such, claim 9 is respectfully submitted to be allowable with claim 1 and for the additional limitations recited therein. Claim 10 depends from claim 9 and is submitted to be allowable with claim 9 for the reasons noted above. The Mancini reference does not overcome the deficiencies of Licht or "Flexible Electronic Systems" Accordingly, it is respectfully requested that the rejections of claims 9 and 10 be withdrawn.

VI. Rejection of Claims 11-12, 16, 20 and 21 Under 35 U.S.C. §103(a)

Claims 11-12 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Canada.

Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Jollota, and further in view of Canada.

Claims 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Licht in view of Keyes.

It is respectfully submitted that these claims are in condition for allowance with independent claim 1, because Canada, Jollota and/or Keyes fail to cure the deficiencies of Licht detailed above. None of these documents disclose a distributed modular i/o system having a master input/output portion as defined in claim 1, a physically separate servant input/output portion as defined in claim 1, and a wireless backplane link operatively connecting the master and servant backplane sections. As such, dependent claims 11-12, 16, 20 and 21 are also respectfully submitted to be in condition for allowance.

CONCLUSION

For the reasons detailed above, it is respectfully submitted that all pending claims are now in condition for allowance and that this application meets all other statutory requirements. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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Date

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